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ABSTRACT

The structure of characterizations of college students by faculty members, particularly observable and significant dimensions or trait patterns, were investigated. Student ratings by faculty members on 80 bi-polar traits, together with Scholastic Aptitude Test (SAT) scores and high school and college freshman average grades, were obtained. Intercorrelations were computed, and the resultant matrix factored and rotated to the normal equamax criterion. Eighteen factors were found to account for about 86% of the correlation among the original variables. These factors revealed a relatively complex or multi-dimensional judgmental framework, with factors devoted to various aspects of intellectual qualities (functional orientation to work, character traits, interpersonal relations, and intrapersonal adjustment). Limitations of the study are fully outlined. See also TM 000 174, 000 176, and TM 000 178-000 181. (Author/EG)

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FACULTY PERCEPTIONS OF STUDENTS

III. Structure of Faculty Characterizations

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Abstract

The major purpose of this study was to determine the structure of characterizations of students by faculty members. What dimensions (or trait patterns) are of concern, or are observable, and appear meaningful?

Ratings of students by faculty members on 80 rating scale variables, together with SAT scores and high school and freshman average grades, were obtained; intercorrelations were computed, and the resultant matrix factored and rotated to the normal equamax criterion.

Eighteen factors were found, 16 of which were drawn primarily from the rating scale variables. The 18 factors accounted for about 86% of the correlation among the original variables. These factors reveal a relatively complex or multi-dimensional judgmental framework, with factors devoted to various aspects of intellectual qualities, functional orientation to work, character traits, interpersonal relationships, and intrapersonal adjustment.

FACULTY PERCEPTIONS OF STUDENTS

III. Structure of Faculty Characterizations

Introduction

The sharp increase in numbers of college applicants, together with the historical focus on scholastic aptitude and achievement bases for selective admissions, has raised forcefully some questions as to the adequacy of traditional practices in choosing among applicants. This is a natural and reasonable question for those institutions facing the need to select among applicants for the first time, where long-standing institutional goals have been fulfilled with students of less than the highest intellectual calibre. In addition, however, many institutions which have practiced exclusion of a portion of applicants for a long time have now reached a point where virtually all applicants stand at or near the top of the range on traditional admissions criteria, and where other qualities must be used in selecting a class. The issue is important not only against the need for fairness to prospective students who are judged, in increasing proportions, before the test of performance, but also against the fact that admissions philosophy and practice would seem a rather powerful way to manipulate the character and impact of an institution.

A review of the characteristics admissions officials state they seek in applicants would reveal at least three additional classes of criteria beyond those of scholastic promise. One class involves the specification of a particular kind of student background which may affect or maintain a desirable balance among various identifiable subgroups of students: e.g., Harvard's current emphasis on rural or small-town background (Glimp and Whitla, 1964). A second class of criteria reflects the need to recognize certain vested

interests, e.g., the frequent preference for sons of alumni, or, in a public university, for applicants residing in the state served. A third and important class of criteria involves some specification of a generally valued human trait or quality, e.g., unusual strength of character, leadership ability, energy and determination, and the like.

Such qualities as those involved in this latter class of criteria are generally drawn from the judgment of admissions officers, other administrative officials, or faculty committees. Although there is value in such exercise, it would be well indeed to determine systematically what qualities the front-line college staff, or teaching faculty, concern themselves with or can distinguish in their students. What qualities can they perceive in students? It is toward this problem that the present inquiry is directed.

Source of Data

This study employed faculty ratings of students collected through the Student Rating Form, an instrument containing 80 bipolar traits for rating on a five point scale. The selection of these traits and the development of the rating form have been described in some detail in a previous report in this series (Davis, 1964a), but in brief the trait descriptions employed were those found to appear frequently in free verbal descriptions of students by faculty members.

The samples of students and faculty employed have also been described in some detail in a previous report (Davis, 1964b, pp. 5-7). In summary, however, random samples (each containing from 50 to 65 students) of upperclassmen were drawn from each of eight participating institutions (Amherst, Caltech, Cornell, Dartmouth, M.I.T., R.P.I., Rutgers, and Stanford), together with an additional

random sample of freshmen at one college. The total group of students numbered 487; attempts were made to obtain at least two current teaching faculty members to rate each student, with these instructors selected randomly from the students' class lists. All told, 1,291 requests for rating were transmitted to faculty. This yielded 911 sets of ratings (or 71% return on requests) involving 485 different raters and 445 different students. The bulk of refusals to rate involved situations (e.g., large lecture sections) where instructors felt they could not get to know students well enough to complete the rating task. A subgroup of these data, constituted by taking those sets of ratings with evaluations on 50% or more of the 80 variables, was drawn; this subgroup consisted of 696 sets of ratings involving 407 raters and 398 students. Both the total group and the subgroup were employed in the present analyses.

Other data drawn from institution records included the student's scores on the Scholastic Aptitude Test (SAT-V and SAT-M), and his high school and freshman average grades (grades data were transmuted, within each institutional group, to a standard score scale with mean of 50 and standard deviation of 10).

Procedure

For each of the sets of ratings, all omitted items were assigned the whole number (from 1 to 5) which was closest to the mean for all raters and students on that item. Thus, for succeeding computations there were no missing rating scale data.

Those 696 sets of ratings with evaluations for 50% or more of the traits were employed in the first analysis. Product moment intercorrelations among

the 80 rating scale variables, SAT-V, SAT-M, the High School Average Grade, and the Freshman Grade Point Average, were computed.¹ For this 84 x 84 matrix, factor extraction was accomplished by an iterative principal axis procedure (Saunders, 1960), involving successively improved estimates of the number of factors and of the communalities for the 84 variables. Adequate convergence was judged to have occurred after eight iterations, whereupon the 18 apparently significant factors accounted for a total of 50.84 units of variance (sum of latent roots), while the 66 apparently insignificant factors accounted for only 8.03 units of variance.

The decision to stop at 18 factors was based on an inspection of latent roots. The criterion of symmetry would indicate 23 factors. Because of the possible systematic distortion introduced by utilizing whole number approximations of means for missing data, it was felt that a more conservative criterion must be used. Differences between successive roots indicated the possibility of 17, 18, or 22 factors. It was decided to stop at 18, where the value of the 18th root is .388; the range of values for rejected roots is .336 to -.234.

Accepting the judgment for 18 factors, then, 60.5% of the total variance, or 86.4% of the correlation among the variables, is accounted for by means of the common factors.

A blind orthogonal approximation to simple structure was yielded by rotation to the normal equamax criterion (Saunders, 1962).

¹It should be noted that the rating (rather than the student) is the unit of analysis; as some students were rated more than once, SAT and grades data were duplicated in many instances.

Finally, factor scores were computed for the 911 cases (including those with more than 50% of the items omitted) by the formula

$$S = XF(F'F)^{-1}$$

where X is the matrix of standard scores on items, and F is the equamax factor matrix. For these computations, as before, missing data were replaced by the nearest whole number approximation of the mean for all raters and students on that variable. Intercorrelations were computed among the 18 factor scores, 15 marker items from a separate part of the Student Rating Form (excluded from the original 84 x 84 matrix), and a value representing the number of ratings, among the 80, which had been omitted.

Results and Discussion

Table 1 presents the intercorrelations among the 84 variables. Of this data mass, the most significant general feature is the large number of relatively high relationships among the rating scale variables; certainly some halo effect is operating.²

The more manageable summary of these relationships is provided by the rotational solution. Table 2 presents the communalities and loadings for the 84 variables, and the latent roots for the 18 factors. Variables are grouped according to their primary loadings; Table 2 also provides tentative titles for each of the 18 factors.

Table 2 presents the factors in the order indicated by the magnitude of the latent roots. With rotation to the normal equamax criterion, this order

²Toward this point, the size of the first six principal axes roots are 23.73, 7.29, 4.36, 2.98, 2.38, and 1.51.

Variable	Mean	S.D.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
1. High academic performance	3.5	1.0																		
2. Works steadily	3.6	1.2	.41																	
3. High interest in chosen field	4.0	0.9		.35																
4. Imaginative	3.4	1.0			.40															
5. Pleasant	4.2	0.9				.28														
6. Gregarious	3.2	1.0					.27													
7. Independent	3.8	0.9						.27												
8. Culturally rich	3.2	0.8							-.04											
9. Flexible	3.4	0.9								.39										
10. Broad intellectual interests	3.4	0.9									.46									
11. Seldom worries	3.1	0.8										.44								
12. Conforming	3.2	0.9											.01							
13. Above average ability	3.8	1.0												.05						
14. Meets deadlines	3.9	1.2													-.20					
15. Interested in others	3.3	0.8														.13				
16. Shows originality	3.4	1.0															.20			
17. Cooperative	4.2	0.9																.21		
18. Active in campus life	3.3	0.8																	.26	
19. Honest	4.5	0.8																		
20. Socially mature	3.5	1.0																		
21. Intellectually mature	3.4	1.0																		
22. Eager to learn	3.9	1.0																		
23. Calm	3.4	1.1																		
24. Conventional (vs. individualistic)	2.9	1.0																		
25. Good grasp of abstract	3.4	1.0																		
26. Self-disciplined	3.8	1.0																		
27. Altruistic	3.2	0.7																		
28. Good at analyzing	3.5	1.0																		
29. Likable	4.2	0.9																		
30. Leader among peers	3.1	0.9																		
31. Self-directing	3.3	1.0																		
32. Personal goals clear	3.3	1.1																		
33. Willing to ask questions	3.6	1.2																		
34. Interested in ideas	3.9	1.0																		
35. Happy	3.9	0.8																		
36. Low need to stand out	3.0	0.8																		
37. Makes good grades with ease	3.0	1.0																		
38. Thorough	3.6	1.1																		
39. Not status-centered	3.1	0.8																		
40. Deep	3.3	0.8																		
41. Willing to take direction	4.0	0.9																		
42. Extroverted	3.0	1.0																		
43. Acts ethically	4.2	0.8																		
44. Sophisticated	3.2	0.8																		
45. Open-minded	3.8	0.8																		
46. Reads widely	3.2	0.7																		
47. Good self-understanding	3.3	0.8																		
48. Orthodox in behavior	3.5	0.9																		
49. Intellectually quick	3.5	1.0																		
50. Industrious	3.7	1.1																		
51. High concern for welfare of others	3.3	0.8																		
52. Creative	3.2	0.9																		
53. Stable	3.9	0.9																		
54. Liked by peers	4.0	0.7																		
55. Low need for reassurance	3.0	0.8																		
56. High motivation to achieve	3.7	1.0																		
57. Fair-minded	4.0	0.8																		
58. Realistic in outlook	3.8	0.9																		
59. Positive family influence	3.1	0.6																		
60. Accepts majority values	3.2	0.8																		
61. Performs to top of ability	3.4	1.1																		
62. Completes undertakings	4.0	1.0																		
63. Optimistic	3.4	0.8																		
64. Intellectually versatile	3.3	1.0																		
65. Affable	3.8	1.0																		
66. Works well with others	3.9	0.8																		
67. Principled	4.2	0.8																		
68. Values like those of faculty	3.2	0.9																		
69. Open to new experience	3.9	0.8																		
70. A serious student	3.9	1.1																		
71. Argumentative	2.9	1.0																		
72. Has few idiosyncrasies	3.5	0.9																		
73. High intellectual curiosity	3.6	1.0																		
74. At home in college culture	3.9	0.9																		
75. High respect for human dignity	4.1	0.6																		
76. Modest	3.8	0.9																		
77. Generally objective in forming opinions	3.6	0.8																		
78. Good sense of humor	3.5	1.0																		
79. High level of physical energy	3.8	0.9																		
80. Kind of student institution should admit	4.0	1.2																		
81. SAT-V	601	83																		
82. SAT-M	662	90																		
83. High School Rank	50.1	9.4																		
84. Freshman GPA	50.8	9.9																		

Note.--Decimal points have been omitted from the intercorrelations.

Table 1

9

5	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84
5	52	25	34	09	-05	49	43	16	53	16	21	30	34	31	56	20	12	60	37	27	05	33	23	31	61	17	16	24	45
6	48	23	33	08	10	54	56	23	22	20	17	33	34	24	56	04	20	35	28	23	23	31	08	21	36	03	03	10	17
8	51	21	25	09	01	43	36	21	32	26	17	25	33	28	44	13	16	47	33	30	09	24	20	28	41	04	05	09	18
4	37	32	27	06	-14	23	25	22	67	26	21	27	34	45	41	31	00	67	37	33	01	38	38	28	57	22	20	17	28
6	29	42	30	11	15	25	27	42	31	55	39	44	41	38	31	00	26	37	41	38	35	38	45	26	42	-04	02	07	07
0	10	15	16	13	28	01	07	43	11	49	37	04	03	19	-08	17	18	04	31	07	-06	08	46	34	10	-02	02	03	00
9	27	23	27	08	-20	21	27	16	44	09	11	27	26	29	36	15	03	45	34	28	03	32	19	20	45	19	15	12	23
4	30	29	27	18	-06	23	23	16	53	27	19	26	32	40	34	21	10	50	44	32	09	32	32	19	41	19	08	07	16
8	23	41	38	12	10	18	25	35	47	45	33	28	31	50	26	05	17	39	39	31	22	40	43	25	36	06	06	06	09
2	44	36	27	12	-15	33	30	20	66	26	23	34	41	44	51	28	04	71	45	42	08	41	35	23	51	21	12	16	25
1	-06	16	20	08	21	-06	09	36	11	20	24	08	06	12	-07	-10	24	-02	26	07	04	17	25	22	06	-03	04	01	02
5	01	-04	17	05	47	10	09	13	-24	06	11	01	-03	-11	-07	-32	32	-28	05	-04	18	-03	-05	-02	-12	-12	-10	-04	-11
5	41	24	32	12	-09	27	28	12	58	18	19	27	29	36	44	24	06	59	32	26	-02	30	27	27	59	21	20	24	41
3	40	25	29	10	10	49	62	21	21	15	16	37	28	24	49	02	23	31	21	26	24	30	11	21	37	07	07	14	13
5	18	42	32	14	16	18	27	40	23	45	46	38	28	31	19	-02	29	25	35	43	39	36	41	25	31	-05	01	10	00
7	36	33	28	08	-17	24	27	17	67	24	20	30	36	45	45	29	-03	67	38	34	02	39	36	26	57	24	20	20	30
0	39	44	32	10	18	42	44	33	25	42	38	47	41	41	46	-08	28	39	37	38	44	42	30	23	45	03	05	08	06
6	18	20	14	12	19	10	17	28	20	26	38	17	13	18	09	08	12	16	27	20	10	20	26	29	21	-03	00	06	03
8	31	38	27	10	07	29	36	24	25	19	21	68	36	27	43	-06	22	37	26	40	40	35	20	12	46	02	07	09	13
7	27	34	42	17	13	24	32	34	36	37	39	31	28	31	30	09	31	29	49	33	18	40	40	30	39	02	00	02	08
19	47	40	45	08	-03	45	41	22	56	23	28	35	43	44	57	14	19	63	48	37	16	46	30	26	61	18	13	15	30
10	64	40	36	12	-04	56	49	29	53	35	27	45	44	50	70	24	13	76	38	44	21	45	33	34	62	11	04	16	27
57	-01	22	30	00	19	04	16	30	08	19	28	19	13	14	08	-29	34	-02	24	13	28	25	16	08	13	-04	05	00	03
5	-15	-07	05	-05	-41	-03	03	01	-38	-01	06	-06	-10	-22	-20	-39	33	-42	-08	-11	22	-07	-16	-14	-27	-13	-10	-07	-17
12	31	29	25	08	-17	24	26	07	63	13	13	25	32	37	43	26	-03	63	31	27	-02	33	25	23	51	23	20	18	33
18	51	32	42	10	12	52	55	26	26	20	22	46	39	28	58	01	34	37	35	34	27	39	12	27	46	01	01	08	21
15	17	33	16	06	04	13	25	30	20	24	25	44	28	20	21	05	15	25	22	42	29	34	23	12	27	01	02	06	04
17	38	38	33	05	-09	31	33	16	60	18	17	29	33	41	46	24	08	61	37	30	02	41	27	24	56	23	20	21	34
15	30	47	33	15	11	25	27	38	33	61	43	47	36	42	32	01	30	38	42	41	38	39	50	30	47	-03	04	08	07
16	27	32	26	08	14	19	27	36	29	36	47	28	23	26	21	16	21	28	39	25	09	29	36	36	33	04	00	08	12
27	39	25	30	06	-17	30	39	20	43	13	15	30	29	27	42	17	07	49	33	28	07	36	17	26	43	12	06	13	23
12	51	27	41	18	14	42	41	33	30	31	21	34	31	25	42	18	19	37	36	27	11	29	23	31	41	06	03	09	20
33	42	24	19	14	-07	32	29	28	41	43	21	25	32	39	43	44	-01	56	34	24	00	30	43	29	45	14	05	11	18
35	48	38	27	10	-13	36	35	23	60	30	25	42	43	50	55	27	09	74	40	41	11	43	40	29	62	15	12	16	22
26	23	35	39	17	27	25	27	53	23	50	41	32	28	33	18	-03	34	22	52	32	22	29	46	41	29	-05	-02	01	03
27	-29	09	-04	-08	-04	-13	-08	-07	-20	-12	04	07	00	-10	-13	-37	10	-19	-11	-04	27	00	-12	-17	-12	-06	01	-06	-09
16	21	19	15	04	-08	12	13	11	53	09	08	11	22	28	23	16	-01	42	28	14	-10	18	20	13	40	25	26	23	36
17	61	35	40	11	06	63	64	24	35	20	24	43	38	33	65	13	25	50	36	32	21	43	18	31	53	10	10	15	25
22	02	28	10	00	-15	08	08	08	12	07	07	27	19	14	17	-03	02	19	02	27	24	20	09	02	19	-03	02	05	-03
17	37	37	27	05	-17	28	31	16	57	17	20	40	40	39	49	24	-06	63	31	41	15	40	26	21	55	12	16	18	23
08	39	42	38	09	23	34	43	32	23	37	31	40	37	40	39	-15	30	30	29	34	41	38	29	21	35	-01	02	08	05
08	08	10	13	13	21	02	09	45	05	49	28	01	00	12	-10	17	09	04	27	07	-11	06	42	34	09	-03	00	01	01
18	24	37	24	11	06	23	35	19	18	18	21	63	30	19	34	-08	19	27	18	41	37	27	16	11	38	-01	05	06	09
21	13	22	31	12	12	10	16	23	33	24	29	17	20	26	12	12	17	20	43	18	01	25	32	24	24	04	07	02	10
17	33	59	40	08	04	26	32	33	45	41	36	40	43	60	39	01	21	52	44	42	35	50	39	22	46	08	08	07	14
12	28	27	14	17	-19	19	20	07	51	14	10	22	23	37	39	24	-03	53	29	29	05	24	18	39	19	08	15	20	
19	30	32	44	22	11	28	30	37	38	31	28	35	29	33	33	15	25	34	45	33	20	41	37	29	41	06	04	13	10
07	14	10	24	02	40	18	25	13	-12	10	16	19	10	-01	09	-28	47	-12	13	11	24	13	00	06	05	-13	-03	04	00
18	39	29	32	09	-12	26	26	16	67	18	21	22	29	39	41	30	04	63	39	26	-05	33	30	30	57	23	24	26	39
12	65	38	39	10	05	67	61	31	35	27	25	48	37	34	69	10	19	54	36	35	27	40	19	35	52	05	02	14	23
39	22	40	26	15	12	16	25	36	28	33	41	46	31	29	24	10	21	30	27	50	33	35	34	18	30	-04	00	03	01
13	40	31	30	09	-18	27	27	19	65	24	22	23	37	43	44	27	-01	64	36	33	03	38	36	27	54	17	17	17	25
38	35	40	46	15	26	38	45	39	23	31	36	48	33	30	35	-16	43	26	46	37	36	42	26	23	34	03	04	06	14
15	21	39	37	16	15	16	25	37	25	47	60	33	22	27	21	04	25	24	42	27	29	41	33	30	00	05	05	06	06
-01	16	21	04	02	03	16	21	15	06	15	19	09	15	09	01	17	08	24	17	12	22	13	11	16	03	03	07	11	11
	25	34	09	05	59	49	24	36	24	23	33	38	29	63	20	-17	55	33	30	13	30	20	29	48	09	05	13	25	25
		41	06	05	25	35	32	35	34	37	48	40	49	33	-05	26	39	40											

Table 2
Variables and Factor Loadings (Rotation to Equamax Criterion) for Faculty Ratings

(N = 696)

Variable		Factor Loadings																		
		COM	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R
A. Dependability																				
2. works steadily	63	64	01	10	07	16	23	16	-02	13	08	10	-09	03	09	17	02	11	03	
14. meets deadlines	57	63	06	15	04	21	14	08	02	07	09	09	-10	-01	05	-07	11	12	11	
38. thorough	77	62	14	10	06	19	30	07	03	19	14	11	-23	09	01	22	11	15	10	
62. completes undertakings	61	60	08	11	06	23	17	05	08	15	15	10	-08	14	09	09	05	12	13	
50. industrious	76	57	08	07	09	25	40	13	08	-15	15	11	-07	15	02	25	01	13	12	
61. performs to top of ability	58	50	03	09	11	09	42	10	01	06	11	03	07	06	-03	25	02	13	07	
26. self-disciplined	64	49	10	17	04	27	27	10	-05	15	11	16	-23	05	14	19	00	16	09	
B. Intellectual Ability																				
49. intellectually quick	82	03	63	14	21	03	11	05	8	28	14	02	18	11	07	34	23	12	05	
13. above average ability	73	07	60	08	20	15	12	10	06	23	08	-02	11	06	01	38	18	12	09	
28. good at analyzing	70	14	55	-10	20	07	11	08	06	24	24	05	21	00	03	24	24	08	11	
25. good grasp of abstract	68	09	23	18	29	07	06	07	01	28	15	06	17	02	-07	19	24	08	15	
37. makes good grades with ease	61	-06	52	13	21	-02	04	05	00	18	06	02	07	01	22	30	28	04	-06	
1. high academic performance	71	24	45	01	19	14	30	09	04	19	04	-02	15	08	05	44	14	09	05	
80. kind of student institution should admit	63	14	32	-06	18	28	25	19	11	23	15	11	19	10	00	30	04	14	17	
C. Conformity																				
12. conforming	67	11	-13	76	-09	-01	-02	08	00	-09	-01	-03	03	06	05	-03	-12	04	-11	
48. orthodox in behavior	58	15	-02	69	-13	13	07	07	-02	-34	02	02	12	06	09	04	-07	02	03	
24. conventional (vs. individualistic)	67	07	-23	62	-14	-04	-05	00	-06	-29	-04	00	-03	02	09	-10	-10	-05	01	
60. accepts majority values	44	03	-05	53	-09	05	-05	07	11	-08	05	06	-05	13	16	-06	00	19	-17	
72. has few idiosyncrasies	42	04	00	43	-06	11	16	11	-02	-04	11	14	19	08	28	-01	-02	10	10	
D. Intellectual Values																				
10. broad intellectual interests	75	04	19	-17	58	12	26	08	06	19	15	20	22	11	-04	18	18	13	09	
8. culturally rich	65	02	14	-13	54	06	06	16	-02	21	11	14	31	07	03	05	15	28	00	
46. reads widely	55	02	15	-22	54	08	08	02	-02	14	10	11	10	02	-06	16	13	26	09	
64. intellectually versatile	65	01	36	-14	39	05	11	10	09	27	21	11	18	10	03	22	25	17	06	
73. high intellectual curiosity	80	14	28	-22	38	16	37	13	17	24	23	10	11	09	-13	26	16	05	19	
34. interested in ideas	69	10	30	-14	37	19	32	16	19	22	20	18	15	06	-10	14	16	08	14	

Table 2 (continued)

Variable	Factor Loadings																		
	COM	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R
E. Ethicality																			
19. honest	71	11	01	06	12	71	09	19	-02	10	07	19	05	02	08	12	05	11	20
43. acts ethically	64	14	04	03	03	71	02	12	-04	03	07	19	05	06	07	06	02	11	18
67. principled	70	13	04	03	02	64	13	15	01	08	18	26	09	12	06	02	10	18	22
F. Motivation																			
56. high motivation to achieve	65	36	12	04	12	15	52	12	09	17	14	07	07	13	-11	25	05	10	-06
3. high interest in chosen field	44	19	13	02	15	08	50	11	12	21	07	04	05	06	00	11	05	10	03
70. a serious student	71	42	10	-06	23	23	43	12	-04	12	17	06	13	06	-09	27	12	08	19
22. eager to learn	78	32	21	-05	29	21	41	21	17	22	23	11	09	08	-13	25	06	10	21
68. values like those of faculty	39	10	09	02	16	18	29	23	-02	13	26	20	14	04	06	08	09	04	12
G. Likableness																			
5. pleasant	72	04	05	09	04	20	08	68	15	10	13	21	19	12	07	09	01	11	15
29. likable	78	01	06	05	09	25	05	67	20	01	16	18	20	19	05	10	00	15	19
65. affable	67	00	-01	03	06	02	12	51	46	01	18	13	04	24	10	-03	05	24	06
17. cooperative	61	29	05	18	14	28	16	45	04	06	23	20	06	18	04	04	07	06	13
H. Extraversion																			
42. extraverted	66	-02	00	03	-06	-07	03	11	67	-11	00	09	09	24	25	00	-01	08	-18
6. gregarious	68	-08	-04	14	02	-07	-06	15	61	-03	03	13	09	36	21	03	00	11	-18
78. good sense of humor	58	-09	14	-04	17	07	03	30	50	08	16	12	13	20	09	-04	02	24	10
33. willing to ask questions	56	15	08	-16	21	10	23	18	45	15	17	10	11	04	-17	17	10	12	05
71. argumentative	58	06	09	-34	10	-07	01	-12	43	14	-09	05	16	-02	-32	21	07	14	-09
63. optimistic	54	06	-07	09	-06	07	13	22	42	15	17	24	02	16	33	00	09	22	01
79. high level of physical energy	39	16	14	-04	00	03	15	07	35	16	04	01	06	30	09	07	-02	26	04
I. Self-Sufficiency/Creativity																			
31. self-directing	59	-23	-14	19	-10	-10	-14	-02	06	53	-07	-08	-19	-13	-12	-21	-07	-11	-12
16. shows originality	77	00	-40	16	-33	-08	-12	-12	-13	48	-14	-06	-15	-10	04	-16	-26	-06	-18
4. imaginative	77	06	-41	11	-34	-05	-16	-07	-17	47	-16	-12	-12	-11	05	-15	-24	-07	-15
7. independent	55	-11	-18	26	-12	-10	-12	-02	08	46	-08	-04	-27	-06	-18	-14	-17	-09	-13
52. creative	69	-04	-40	17	-33	01	-19	-10	-10	43	-16	-09	-15	-12	03	-12	-20	-10	-15
40. deep	63	-10	-30	19	-26	-18	-17	-11	-04	41	-11	-21	-22	-05	09	-14	-17	-09	-26

Table 2 (continued)

Variable	COM	Factor Loadings																	
		A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R
<u>J. Open-Mindedness</u>																			
45. open-minded	67	05	14	01	23	13	09	27	10	17	58	15	13	11	13	09	08	03	17
57. fair-minded	61	04	08	-01	05	23	09	15	03	02	55	23	15	20	12	06	09	09	26
69. open to new experience	55	06	11	-08	28	09	10	22	18	12	51	07	10	12	06	10	10	10	13
77. generally objective in forming opinions	53	11	06	05	06	13	12	09	02	19	44	24	24	10	11	10	12	11	24
9. flexible	57	03	15	03	31	02	-10	31	16	18	40	18	09	13	17	05	06	17	06
41. willing to take direction	56	30	07	27	11	23	11	36	08	02	39	11	01	08	05	02	03	10	10
58. realistic in outlook	51	15	16	19	-02	05	13	06	01	11	33	09	27	11	19	14	-06	33	13
<u>K. Altruism</u>																			
51. high concern for welfare of others	76	03	01	01	11	19	04	09	11	03	10	75	10	26	-03	-01	00	17	14
27. altruistic	58	07	-02	-03	04	20	-01	13	07	06	06	68	06	09	03	06	04	03	16
15. interested in others	65	04	02	11	12	09	02	21	19	00	12	57	06	31	18	01	-01	14	19
75. high respect for human dignity	47	00	08	01	12	28	23	12	03	13	20	37	11	11	05	00	04	16	23
<u>L. Maturity</u>																			
20. socially mature	71	10	04	13	16	11	06	17	15	11	08	11	65	26	20	02	02	17	04
44. sophisticated	55	-03	11	06	14	00	-07	09	12	12	06	05	60	24	12	01	08	14	-04
21. intellectually mature	71	21	34	01	31	12	25	12	00	19	21	10	41	09	08	21	16	09	13
74. at home in college culture	53	03	06	04	20	06	23	20	17	11	17	07	34	21	26	13	10	23	05
<u>M. Popularity</u>																			
30. leader among peers	64	05	02	02	05	09	04	07	24	17	07	20	27	61	10	14	02	02	-06
18. active in campus life	55	-02	-09	10	13	05	01	02	12	22	02	21	09	60	05	06	-02	03	-15
66. works well with others	57	03	08	10	03	06	08	19	15	-09	18	15	11	58	13	-01	06	14	19
54. liked by peers	60	03	10	03	-07	08	05	26	13	-07	11	12	21	54	10	01	06	27	13
<u>N. Anxiety</u>																			
11. seldom worries	51	-08	06	04	-01	-01	-08	-01	21	04	05	03	04	11	63	-02	02	17	04
23. calm	51	07	04	16	-05	06	-01	12	01	-03	09	06	15	12	62	00	02	-04	14
55. low need for reassurance	45	07	-04	-03	04	08	-13	-04	07	17	-02	01	20	01	47	14	02	02	32
53. stable	65	25	00	23	05	29	19	13	05	04	17	09	24	13	46	10	05	18	16
35. happy	64	03	02	15	05	08	22	20	35	02	14	10	09	19	45	-01	-02	33	09

Table 2 (continued)

Variable	COM	Factor Loadings																	
		A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R
O. Grade Achievement																			
Freshman GPA	54	.02	.12	.04	-.04	.05	.10	-.02	-.01	.03	.04	-.04	.06	.01	.04	.64	.30	.01	-.03
High School Rank	31	.03	.05	.05	.01	-.02	-.04	.03	.02	.05	-.03	.05	-.08	.04	-.03	.44	.30	.08	.07
P. Ability																			
SAT-V	56	.01	-.03	-.06	.10	-.02	.00	-.06	-.02	-.01	.02	-.05	.04	-.02	-.03	.17	.71	.02	-.04
SAT-M	52	.00	.08	.00	-.05	.03	-.04	.02	.00	.03	-.02	.01	-.02	-.01	.04	.06	.71	-.03	.01
Q. Self Insight																			
47. good self-understanding	54	.07	.03	.04	.10	.07	.09	.08	.11	.19	.12	.24	.31	.07	.13	.12	.06	.47	.15
59. positive family influence	18	.01	.00	.03	.09	.08	-.02	.04	.07	-.01	-.02	.03	.03	.07	.01	.02	.03	.39	-.01
32. personal goals clear	51	.28	.01	.04	.04	.16	.35	.04	.15	.15	.38	.13	.17	.07	.09	.18	.04	.38	-.06
R. Status-Centeredness																			
39. not status-centered	42	-.03	.01	-.18	.03	.13	-.02	.09	-.08	.11	.06	.22	-.07	-.07	.05	.01	-.02	.04	.53
36. low need to stand out	48	-.07	-.08	.06	-.10	.09	-.16	-.03	-.18	-.15	-.02	-.01	-.08	-.06	.29	-.07	-.02	-.16	.49
76. modest	58	.09	-.13	.22	.02	.25	.07	.28	-.26	-.08	.29	.21	-.08	.16	.13	-.05	-.02	.07	.33
Σa^2		3.7	3.5	3.2	3.1	3.0	3.0	3.0	2.9	2.9	2.9	2.8	2.7	2.7	2.6	2.5	2.2	2.1	2.1

- Notes:
1. Decimal points have been omitted in factor loadings.
 2. Variables are listed in groups in terms of where the highest loading occurs; no variables included in the rotations are excluded from this listing.

is relatively unimportant. For purposes of discussion, it appears more useful to group the factors into the following broad arbitrary areas: intellectual qualities, orientation to work, character traits, interpersonal relationships, and intrapersonal adjustment.

Factors Concerned with Intellectual Qualities

Factors in this group concern ratings of the student's intellectual ability and interests, and include Factors B (Intellectual Ability), D (Intellectual Values), I (Self-Sufficiency/Creativity), O (Grade Achievement), and P (Tested Ability). The last two factors, Grade Achievement and Tested Ability, are drawn primarily from variables external to the rating scales; particularly since there are duplicated cases these might be expected to materialize separately from the faculty perception variables. Nevertheless, it is interesting to note that college faculty can and do separate, in their evaluations of students, general intelligence, creative ability, and intellectual interest.

A summary of the loadings on Factor B, Intellectual Ability, is given in Table 3, where all loadings of .20 or higher are identified. This factor would seem to contain the instructor's perception of both ability and performance, although the emphasis is placed on ability (this may be a function of the scope and content of the available rating scale variables). Variables loading highest on this factor consist primarily of qualitative aspects of mental functioning. Variables from the other two rating scale factors concerned with the intellectual area (Factor I, Self-Sufficiency/Creativity), and Factor D (Intellectual Values) also load moderately on this factor, particularly where the variables consist of qualities that could reflect capacity (e.g., intellectual versatility, depth). Factor B, therefore, would appear

clearly to be perception of intellectual ability. The separation from tested ability and actual performance factors is, of course, most likely a result of highly specific instrument factors.

The second rating scale factor concerned with intellectual qualities is Factor D (Intellectual Values) (Table 4). This factor, in contrast to the ability or capacity content of Factor B, is comprised of variables concerned with intellectual interest or drive manifested over a broad area (rather than directed toward any specific area of interest). A number of variables assigned by their primary loadings to other factor clusters also contribute some of their variance to this factor--e.g., originality, flexibility, intellectual maturity. This factor, though not clearly unrelated to ability, expresses the degree of adience for ideas and intellectual inquiry.

Although faculty separate creativity rather clearly from intellectual ability or from intellectual values, they associate creativity with independence and self-direction (Table 5). Factor I (Self-Sufficiency/Creativity) seems to be concerned with self-initiating, self-sustaining originality. It is not simply a matter of capacity for unusual ideas; the activity must be unique in the sense that it is not tainted by leaning on others. On the other hand, there is no indication that creativity is couched in nonconformity or idiosyncrasy (the relatively neutral "individualistic vs. conventional" variable from the conformity factor is the only loading of note from that cluster). This would seem quite reasonable, for in independence there is a notion of self-sufficiency; nonconformity, though setting an individual apart from the crowd, implies a need to stand out which may be contrary to self-sufficiency in the faculty mind. Other factors contributing several variables include the intellectual ability and intellectual values clusters; yet, the

Table 3

Summary of Noteworthy Loadings:
Factor B (Intellectual Ability)

Variable	Factor Cluster	Loading
49. intellectually quick	B	.63
13. above average ability	B	.60
28. good at analyzing	B	.55
25. good grasp of abstract	B	.53
37. makes good grades with ease	B	.52
1. high academic performance	B	.45
80. kind of student institution should admit	B	.32
4. imaginative	I	.41
16. shows originality	I	.40
52. creative	I	.40
64. intellectually versatile	D	.36
21. intellectually mature	L	.34
34. interested in ideas	D	.30
40. deep	I	.30
73. high intellectual curiosity	D	.28
24. individualistic (vs. conventional)	C	.23
22. eager to learn	F	.21

Table 4

Summary of Noteworthy Loadings:
Factor D (Intellectual Values)

Variable	Factor Cluster	Loading
10. broad intellectual interests	D	.48
8. culturally rich	D	.44
46. reads widely	D	.44
64. intellectually versatile	D	.39
73. high intellectual curiosity	D	.36
34. interested in ideas	D	.37
4. imaginative	I	.34
16. shows originality	I	.33
52. creative	I	.33
9. flexible	J	.31
21. intellectually mature	L	.31
25. good grasp of abstract	B	.29
22. eager to learn	F	.29
69. open to new experience	J	.26
40. deep	I	.26
70. a serious student	F	.23
45. open-minded	J	.23
49. intellectually quick	B	.21
37. makes good grades with ease	B	.21
35. willing to ask questions	H	.21
13. above average ability	B	.20
26. good at analyzing	B	.20
74. at home in college culture	L	.20

Table 5

Summary of Noteworthy Loadings:
Factor I (Self-Sufficiency/Creativity)

Variable	Factor Cluster	Loading
31. self-directing	I	.53
16. shows originality	I	.48
4. imaginative	I	.47
1. independent	I	.46
52. creative	I	.43
40. deep	I	.34
24. individualistic (vs. conventional)	C	.29
49. intellectually quick	B	.28
25. good grasp of abstract	B	.28
64. intellectually versatile	D	.27
8. good at analyzing	B	.24
3. high intellectual curiosity	D	.24
13. above average ability	B	.23
80. kind of student institution should admit	B	.23
44. interested in ideas	D	.22
22. eager to learn	F	.22
18. active in campus life	M	.22
8. culturally rich	D	.21
3. high interest in chosen field	F	.21

emphasis is on capacity rather than interest or values. There is little evidence that creativity here is characterized by a drive-state, and none that it must be wide-ranging in its application. It is most exactly an intelligence-derived capacity for independent originality, whether mobilized or not.

Although Factors O (Grade Achievement) and P (Tested Ability) draw the bulk of their variance from the variables separate from the faculty ratings, there is a moderate amount of variance contributed by expected rating variables (Tables 6 and 7). Secondary loadings are achieved on these two factors by variables under Factors B (Intellectual Ability), D (Intellectual Values), I (Self-Sufficiency/Creativity), and on the grades factor by variables under Factors A (Dependability) and F (Motivation). As might be expected, with grades more the currency for upperclassmen than admission test scores, rating scale variables have more substantial impact on the grades factor than on the tested ability factor. Tested ability is almost entirely that, with moderate components of actual performance, and some variables expressing mental acuity (e.g., analytic ability and originality). The achievement factor, on the other hand, is where the faculty member puts his substantial vote for the broader intellectual qualities together with motivation and industry. Although intellectual ability, motivation, intellectual values, and dependability separate in the rating scale factor structure, achievement reflects a small component of each. Creativity is not strikingly a part of grade achievement, however.

In summary, then, factors in the intellectual qualities group indicate that faculty can perceive as separate entities the traits of intellectual ability (and performance), intellectual values, and independent originality.

Table 6
Summary of Noteworthy Loadings:
Factor O (Grade Achievement)

<u>Variable</u>	<u>Factor Cluster</u>	<u>Loading</u>
Freshman GPA	O	.64
High School Rank	O	.44
1. high academic performance	B	.44
13. above average ability	B	.38
49. intellectually quick	B	.34
37. makes good grades with ease	B	.30
80. kind of student institution should admit	B	.30
70. a serious student	F	.27
73. high intellectual curiosity	D	.26
50. industrious	A	.25
61. performs to top of ability	A	.25
56. high motivation to achieve	F	.25
22. eager to learn	F	.25
28. good at analyzing	B	.24
38. thorough	A	.22
64. intellectually versatile	D	.22
71. argumentative	H	.21
31. self-directing	I	.21
21. intellectually mature	L	.21

Table 7
Summary of Noteworthy Loadings:
Factor P (Ability)

<u>Variable</u>	<u>Factor Cluster</u>	<u>Loading</u>
SAT-V	P	.71
SAT-M	P	.71
Freshman GPA	O	.30
High School Rank	O	.30
37. makes good grades with ease	B	.28
16. shows originality	I	.26
64. intellectually versatile	D	.25
28. good at analyzing	B	.24
25. good grasp of abstract	B	.24
4. imaginative	I	.24
49. intellectually quick	B	.23
52. creative	I	.20

In this situation where ratings were obtained before course grades could be assigned and where the remote high school and freshman averages were the measures of actual grades, the variance of grades and tested ability was sufficiently unique to establish these as factors separate from those outlined by the faculty perceptions of students. However, ratings of intellectual interests, or capabilities, or of habit patterns believed necessary for good academic performance, are moderately related to actual grades.

Factors Concerned with Functional Orientation to Work

Related to academic behavior, but separate from qualities of mental ability, intellectual interest, and actual performance, are those factor clusters which seem to involve one or another class of consistent and habitual application to tasks faculty may assign or promote. These include Factor A (Dependability), Factor F (Motivation), and Factor J (Open-Mindedness).

Factor A (Dependability) (Table 8) expresses the degree of energy, order, and consistency put into day-by-day academic activities. Although motivation is structured as a separate factor, elements of taking work seriously and being eager to learn figure in, as well as elements of cooperativeness and stability. Yet, the emphasis seems to be on work for its own sake, on a routine and unquestioned acceptance of requirements as tasks that are to be completed in good form. Factor A is a matter of personal investment of energy as a matter of habit.

Factor F (Table 9), on the other hand, is concerned with activity originating from emotional involvement with academic matters in terms of desire to achieve, interest in a field, or personal concern for performing well. The driving force is visceral now rather than autonomic. Goals are clear, and

Table 8

Summary of Noteworthy Loadings:
Factor A (Dependability)

Variable	Factor Cluster	Loading
2. works steadily	A	.64
14. meets deadlines	A	.63
38. thorough	A	.62
62. completes undertakings	A	.60
50. industrious	A	.57
61. performs to top of ability	A	.50
26. self-disciplined	A	.49
70. a serious student	F	.42
56. high motivation to achieve	F	.36
22. eager to learn	F	.32
41. willing to take direction	J	.30
17. cooperative	G	.29
32. personal goals clear	Q	.28
53. stable	N	.25
1. high academic performance	B	.24
31. self-directing	I	.23
21. intellectually mature	L	.21

Table 9

Summary of Noteworthy Loadings:
Factor F (Motivation)

Variable	Factor Cluster	Loading
56. high motivation to achieve	F	.52
3. high interest in chosen field	F	.50
70. a serious student	F	.43
68. values like those of faculty	F	.29
22. eager to learn	F	.41
61. performs to top of ability	A	.42
50. industrious	A	.40
73. high intellectual curiosity	D	.37
32. personal goals clear	Q	.35
34. interested in ideas	D	.32
38. thorough	A	.30
1. high academic performance	B	.30
26. self-disciplined	A	.27
10. broad intellectual interests	D	.26
80. kind of student institution should admit	B	.25
21. intellectually mature	L	.25
2. works steadily	A	.23
33. willing to ask questions	H	.23
75. high respect for human dignity	K	.23
74. at home in college culture	L	.23
35. happy	N	.22

Table 10

Summary of Noteworthy Loadings:
Factor J (Open-Mindedness)

Variable	Factor Cluster	Loading
45. open-minded	J	.58
57. fair-minded	J	.55
69. open to new experience	J	.51
77. generally objective in forming opinions	J	.44
9. flexible	J	.40
41. willing to take direction	J	.39
58. realistic in outlook	J	.33
76. modest	R	.29
68. values like those of faculty	F	.26
28. good at analyzing	B	.24
73. high intellectual curiosity	D	.23
22. eager to learn	F	.23
17. cooperative	G	.23
64. intellectually versatile	D	.21
21. intellectually mature	L	.21
34. interested in ideas	D	.20
75. high respect for human dignity	K	.20

the academic culture is valued. Achievement is a vital part of proving oneself. Attention to tasks is active and ambitious, not because of simple work habits nor of intellectual interests and ability, but because of a manifest desire to achieve at high levels.

Factor J (Open-Mindedness) is summarized through Table 10. The variables contributing the highest loadings describe intellectual plasticity or receptiveness to new ideas and experience, but also a sense of fairness, or objectivity, or realism in reacting to situations. It must be noted, of course, that the objectivity, fairness, and realism is the value judgment of the rater, who must also be the progenitor of the new experience or ideas to which the student is to react. Students who seem open to consider these new ideas also seem fair and objective. Simple cooperativeness enters in to a limited extent, but there seems more to it than mere desire to go along with the faculty member or to sustain a pleasant relationship with him. It is also not so much a matter of broad-ranging intellectual curiosity which might drive the student in a personal quest for development. This trait seems most exactly a simple ability or willingness to put aside for a moment or longer personal preconceptions or interpretations, to examine new points of view, and, probably, to incorporate these new ideas into former frames of reference.

Factors Concerned with Character Traits

In this area are those factors concerned with moral development or the distinctiveness of the individual (to the observer) outside the context of ability, orientation to academic work, overt relationships to others, or personal adjustment. This group of factors is, in fact, characterized by absence of content concerned with academic performance or which might be a part of

traditional academic evaluation standards; yet these factors involve personal characteristics which should invoke strong value judgments by a humanistic observer.

The first of these is Factor E (Ethicality) (Table 11), where the three variables with primary loadings hereon refer explicitly to honesty and integrity, or behavior strongly controlled by ethic and principle. There is a wide gap between these primary variables vs. others contributing secondary loadings, and secondary variables come from a variety of other factor clusters. This factor seems clear-cut and specific to personal honesty or probity.

Conceptually if not structurally related is Factor K (Altruism) (Table 12). Again, primary variables are clear-cut, and describe interest and pervasive concern for the welfare of others. Variables with secondary loadings on this factor seem to reflect a variety of minor echo manifestations of the perception of altruism, e.g., principle-oriented behavior, self-understanding, involvement in campus life, and modesty. The concern for others would seem relatively broad and remote; however, the total group of traits employed provides no measure of altruistic concern or nonconcern with immediate people in continuing dynamic relationship with the individual, although there is good separation from the extraversion factor.

Factor G (Likableness) (Table 13) seems to be a rather direct reflection of a highly personalized reaction of the evaluator to the individual. Whatever the student's other attributes, interests, or personality, it would seem here that there is a personal attraction or affinity for him that can be expressed as such. It is probably most remarkable that although many of the other factors express qualities that could bias the evaluation, the degree

Table 11

Summary of Noteworthy Loadings:
Factor E (Ethicality)

Variable	Factor Cluster	Loading
19. honest	E	.71
43. acts ethically	E	.71
67. principled	E	.64
53. stable	M	.29
80. kind of student institution should admit	B	.28
17. cooperative	G	.28
75. high respect for human dignity	K	.28
26. self-disciplined	A	.27
50. industrious	A	.25
29. likable	G	.25
76. modest	R	.25
62. completes undertakings	A	.23
70. a serious student	F	.23
57. fair-minded	J	.23
41. willing to take direction	J	.23
14. meets deadlines	A	.21
22. eager to learn	F	.21
5. pleasant	G	.20
27. altruistic	K	.20

Table 12

Summary of Noteworthy Loadings:
Factor K (Altruism)

Variable	Factor Cluster	Loading
51. high concern for welfare of others	K	.75
27. altruistic	K	.68
15. interested in others	K	.57
75. high respect for human dignity	K	.37
67. principled	E	.26
63. optimistic	H	.24
77. generally objective in forming opinions	J	.24
47. good self-understanding	Q	.24
57. fair-minded	J	.23
39. not status-centered	K	.22
5. pleasant	G	.21
40. deep	I	.21
18. active in campus life	M	.21
76. modest	R	.21
10. broad intellectual interests	D	.20
68. values like those of faculty	F	.20
17. cooperative	G	.20
30. leader among peers	M	.20

Table 13

Summary of Noteworthy Loadings:
Factor G (Likableness)

Variable	Factor Cluster	Loading
5. pleasant	G	.68
29. likable	G	.67
65. affable	G	.51
17. cooperative	G	.45
41. willing to take direction	J	.36
9. flexible	J	.31
78. good sense of humor	H	.30
76. modest	R	.28
45. open-minded	J	.27
54. liked by peers	M	.26
68. values like those of faculty	F	.23
63. optimistic	H	.22
69. open to new experience	J	.22
22. eager to learn	F	.21
15. interested in others	K	.21
74. at home in college culture	L	.20
35. happy	N	.20

to which the faculty member is personally attracted to a student can be separated from the judgments of these other traits.

In terms of content, then, this factor reflects the student's possession of qualities which make him appear likable. The best indication of what these qualities are comes from a content of impressions of him as pleasant, affable, cooperative. His positive and interested bearing elicits a positive reaction in return. With separation of this factor from those concerned with the reaction of peers (Leadership) and the drive for social stimulation (Extraversion), a channel is provided through which the evaluator can express his own generalized reaction to the student's attractiveness as a person. The student liked or approved in this sense has achieved this status not through daring action, bold stand, or unusual achievement, but by his easy, good-natured, pleasant affability.

Factors Concerned with Interpersonal Relationships

Another set of factors which would seem to be divorced from those pertaining to the student's academic status are those concerned with his interaction with peers. With fairly clean separation from matters obviously related to performance, these factors reflect distinguishable differences among students in their drive for social stimulation, or in their effectiveness and characteristic bearing in relationships with peers

The first of these, Factor H (Extraversion), is summarized in Table 14. This factor obviously consists of not only receptivity for social stimulation, but also drive for responsive and vigorous, though not unpleasant, interaction with others. Affability, with primary loading on the likableness factor, loads .46 on extraversion. The picture is one of a student who interacts,

with no connotation of success or failure in the interaction, nor of specific purpose behind the interaction; yet, interaction is seen as lively and pleasant, and the opposite or introversion pole has connotations of coolness, absence of sense of humor, placidity or low energy, pessimism, and unhappiness.

Factor M (Popularity) (Table 15) is concerned not so much with the internal drive for social stimulation, but more with effectiveness in peer relationships. One must interact to be effective or ineffective, but the interaction seems to be secondary, and a natural concomitant of earlier success. The leadership is seen not as a result of political maneuver, but with tinges of altruism, maturity and sophistication, and sense of fair play.

A third factor grouped with extraversion and popularity is Factor C (Conformity) (Table 16). Faculty seem here to be stating whether the student runs with the orthodox, majority crowd or the minority cluster of nonconformists. The secondary variables do not hint much at any assumed etiology or suspected purpose of such behavior, but rather at intellectual concomitants. The reason may be that conformity in the sense indicated here is not a simple, wholesome compliance with societal codes of behavior and thinking, but has connotations of dullness and dependence; or, this "conformity" may be a reflection of a faculty stereotype that intellectual vitality must be reflected in occasional individualistic or even eccentric behavior. Even if the latter is true, however, there is no evidence that the creative, intellectually alive student must also be unorthodox.

A final factor in this group is Factor L (Maturity) (Table 17) which is placed with the interpersonal relationship area because the major emphasis seems to be on social maturity and sophistication. Rather than indicate behavior characteristic of the mode for a higher general level of development,

Table 14

Summary of Noteworthy Loadings:
Factor H (Extraversion)

Variable	Factor Cluster	Loading
42. extraverted	H	.67
6. gregarious	H	.61
78. good sense of humor	H	.50
33. willing to ask questions	H	.45
71. argumentative	H	.43
63. optimistic	H	.39
79. high level of physical energy	H	.35
65. affable	G	.46
35. happy	N	.35
76. arrogant	R	.26
30. leader among peers	M	.24
11. seldom worries	N	.21
29. likable	G	.20

Table 15

Summary of Noteworthy Loadings:
Factor M (Popularity)

Variable	Factor Cluster	Loading
30. leader among peers	M	.61
18. active in campus life	M	.60
66. works well with others	M	.58
54. liked by peers	M	.54
6. gregarious	H	.36
15. interested in others	K	.31
79. high level of physical energy	H	.30
51. high concern for welfare of others	K	.26
20. socially mature	L	.26
65. affable	G	.24
42. extraverted	H	.24
44. sophisticated	L	.24
74. at home in college culture	L	.21
78. good sense of humor	H	.20
57. fair-minded	J	.20

Table 16

Summary of Noteworthy Loadings:
Factor C (Conformity)

Variable	Factor Cluster	Loading
12. conforming	C	.76
48. orthodox in behavior	C	.69
24. conventional (vs. individualistic)	C	.68
60. accepts majority values	C	.53
72. has few idiosyncrasies	C	.43
71. placid	H	.34
41. willing to take direction	J	.27
7. dependent	I	.26
53. stable	N	.23
76. modest	R	.22
46. does not read widely	D	.22
73. low intellectual curiosity	D	.22

Table 17

Summary of Noteworthy Loadings:
Factor L (Maturity)

Variable	Factor Cluster	Loading
20. socially mature	L	.65
44. sophisticated	L	.60
21. intellectually mature	L	.41
74. at home in college culture	L	.34
8. culturally rich	D	.31
47. good self-understanding	Q	.31
7. independent	I	.27
58. realistic in outlook	J	.27
30. leader among peers	M	.27
77. generally objective in forming opinions	J	.24
53. stable	N	.24
38. thorough	A	.23
26. self-disciplined	A	.23
10. broad intellectual interests	D	.22
40. deep	I	.22
28. good at analyzing	B	.21
54. liked by peers	M	.21
29. likable	G	.20
55. low need for reassurance	N	.20

this factor seems to reflect polish, or a feeling of ease in the college culture. The student rated high is essentially the attractive sophisticate, though he may manifest a number of other characteristics such as self-insight, independence, realism, and leadership.

In summary, then, faculty can go beyond judging the student in terms of their own attraction to him, and assess him in terms of (1) his drive for social stimulation, (2) his acceptability to peers, (3) his degree of conformity to majority values, and (4) his social maturity.

Factors Concerned with Intrapersonal Adjustment

In this group are those factors which are concerned, in one way or another, with the self-structure of the individual. The first of these is Factor N (Freedom from Anxiety) (Table 18), which involves essentially the absence of evidence of worry and excitability. Stability, absence from need for reassurance, and a characteristic happy appearance are also part of this factor. Some of the variables in the extraversion factor cluster load here, but not in consistent directions: the positive pole is characterized by optimism, extraversion, and gregariousness, but by placidity rather than argumentativeness. All in all, it would seem that this factor is concerned with surface manifestations of psychological adjustment or mental health.

Factor Q (Self-Insight) (Table 19) seems also to reflect psychological adjustment, but at a somewhat deeper level. The focus is away from anxiety, and on self-understanding perhaps rooted in a healthy developmental history and manifested through clarity and realism of personal goals. There is freedom to search about in the environment, to look for something to invest oneself in. Peers find the trait pattern attractive.

Table 18

Summary of Noteworthy Loadings:
Factor N (Freedom from Anxiety)

Variable	Factor Cluster	Loading
11. seldom worries	N	.63
23. calm	N	.62
55. low need for reassurance	N	.47
53. stable	N	.46
35. happy	N	.45
63. optimistic	H	.33
71. placid	H	.32
36. low need to stand out	R	.29
72. has few idiosyncrasies	C	.28
74. at home in college culture	L	.26
42. extraverted	H	.25
37. makes good grades with ease	B	.22
6. gregarious	H	.21
20. socially mature	L	.20

Table 19

Summary of Noteworthy Loadings:
Factor Q (Self-Insight)

Variable	Factor Cluster	Loading
47. good self-understanding	Q	.47
59. positive family influence	Q	.39
32. personal goals clear	Q	.38
58. realistic in outlook	J	.33
35. happy	N	.33
8. culturally rich	D	.28
54. liked by peers	M	.27
46. reads widely	D	.26
79. high level of physical energy	H	.26
65. affable	G	.24
78. good sense of humor	H	.24
74. at home in college culture	L	.23
63. optimistic	H	.22

Table 20

Summary of Noteworthy Loadings:
Factor R (Freedom from Status-Centeredness)

Variable	Factor Cluster	Loading
39. not status-centered	R	.53
36. low need to stand out	R	.49
76. modest	R	.33
55. low need for reassurance	N	.32
40. deep	I	.26
57. fair-minded	J	.26
77. generally objective in forming opinions	J	.24
75. high respect for human dignity	K	.23
67. principled	E	.22
22. eager to learn	F	.21
19. honest	E	.20

Factor R (Freedom from Status-Centeredness) (Table 20) seems to indicate an absence of concern for standing apart which, rather amazingly, seems quite separate from conformity. Faculty apparently structure this trait on the basis of their interpretation of the student against a personal, ethical standard, rather than against one drawn from behavioral comparison with peers. The concern with status seems somewhat self-centered, and at the expense of concern for others; it does not seem to consist of a laudatory striving for personal development and competence.

Comparison of Factors against Marker Items

The foregoing interpretation has been based on the content of the factors which evolved from the rotational solution and internal analysis. The additional variables provided by the Student Rating Form, and contrived to represent an estimate of the ultimate structure, provide separate summary ratings against which the descriptions of the factors may be checked.

Table 21 presents the correlations between the 15 marker items and the factor scores for each of the 18 factors. The marker variables are identified by excerpts of key words therein; the exact wording of each has been provided elsewhere (Davis, 1964b, Appendix B, pp. 3-4).

In general, these findings confirm the interpretation nicely for 10 of the 18 factors: those labeled Dependability, Intellectual Ability, Ethicality, Likability, Self-Sufficiency/Creativity, Open-Mindedness, Altruism, Popularity, Freedom from Anxiety, and Grade Achievement. In each of these cases, the relationships are highest where the interpretations would predict them to be. Of the remaining eight factors, some were not anticipated, and find no substantial correlate: these include Conformity, Motivation (best

Table 21

Relationships Between Marker Variables and Factor Scores

Marker Variables	N	Factors																	
		A Dep	B Abl	C Cnf	D IV	E Eth	F Mot	G Lik	H Ext	I Cre	J Osm	K Alt	L Mat	M Pop	N Anx	O GPA	P SAT	Q Ins	R Sta
a. Number of "Unknown" responses	911	-01	01	21*	21*	08	-17*	03	14*	25*	-13*	33*	07	-09	-06	08	-08	04	-05
1. Scholastic Aptitude	776	03	48*	-03	19*	08	09	11	06	15*	-03	07	06	00	03	35*	16*	03	00
2. Academic Performance	814	22*	39*	03	17*	13*	09	13	05	11	-03	04	08	02	04	38*	11	02	01
3. Performance against students of equal ability	745	38*	04	09	12	08	25*	09	06	10	00	08	06	06	00	17*	-06	06	06
4. Intellectual curiosity: interest in ideas or unknowns	785	11	14*	-14*	27*	05	27*	14*	20*	16*	08	07	06	01	-12	21*	08	-01	10
5. Academic work habits: thorough vs. haphazard preparation	773	47*	16*	15*	10	07	27*	09	05	10	-01	11	15*	02	04	25*	01	02	01
6. Creative: original, resourceful, vs. stereotyped, unimaginative	701	02	29*	-10	27*	07	12	08	12	35*	06	07	06	10	-05	12	17*	01	10
7. Likable vs. difficult to like as a person	803	04	06	00	13*	10	05	45*	18*	04	07	16*	16*	14*	05	08	-06	08	12
8. Relationships with peers: accepted, active, vs. devoid of skill	455	00	08	07	00	10	06	22*	17	09	-03	09	26*	45*	07	08	-02	09	04
9. Personal adjustment: stable vs. personal difficulties	680	13	05	15*	01	10	13	18*	12	03	07	05	21*	10	43*	09	-05	10	08
10. Capacity for self-direction: self-sufficient vs. leaning	650	24*	14	-01	09	08	12	-01	-01	32*	04	03	19	10	23*	15*	12	08	10
11. Ability to profit from experience: receptive vs. rigid	695	05	16*	07	23*	11	08	24*	06	14	32*	12	03	02	04	13	04	00	11
12. Compatibility with cultural climate	655	08	23*	09	12	01	11	13	10	12	05	03	29*	15*	21*	17*	09	10	-02
13. Integrity: honesty	638	14	03	07	10	58*	06	17*	-03	09	03	12	02	03	07	05	03	-01	14
14. Social values: concern for others' welfare vs. self-centered	438	06	-03	01	12	27*	11	14	05	06	08	50*	15	18*	-01	06	-04	06	16
15. Planful: clear, realistic vs. confused re goals	464	28*	01	10	-05	07	36*	06	06	16	04	08	18*	00	20	17	02	26*	-06

*significant at or beyond the .01 level.

Note.—As some subjects were rated by more than one rater, the number of degrees of freedom for testing significance of correlation coefficients is about half the N shown. This more conservative value has been used in determining significance.

interpreted here as planfulness, or clarity and realism of academic and professional goals), Extraversion, Maturity, SAT, Self-Insight, and Freedom from Status Centeredness. This leaves Intellectual Values, where the item written as a definition has only moderate relationship which other marker items approach or equal: e.g., creativity and open-mindedness.

Nevertheless, it may be stated that in virtually every instance these results support the previous interpretation. Relationships do not skyrocket, for indeed there is halo and obvious multiple content operating in the marker items (see Table 22). Yet, the content found in the factors is reflected and confirmed in these data (e.g., creative and independent components in Factor I, or the interpretation of Factor N as a lay concept of psychological adjustment).

The relationships between factor scores and the number of unknown responses (in each set of 80 ratings) are significant in seven of the 18 instances. Although these relationships are not very high, and though some may be a function of a tendency toward a particular judgment in the absence of information (e.g., the student not standing out may as a result be judged as conventional, in the absence of unorthodox behavior which would help him to become known), there is the distinct possibility that using whole number approximations of means for missing data may have biased results. The relationships found should be the upper limit, as these data were based on the total group of 911 ratings, or the 696 used in the factor analysis plus 215 with more than half of the variables omitted.

Table 22
Interrelationships Among Marker Variables

	Min. N	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1. Scholastic Aptitude	380	-														
2. Academic Performance	379		74	21	49	40	56	25	26	20	41	35	41	22	10	32
3. Performance vs. Ability	372		-	50	48	59	51	26	31	34	48	42	45	35	27	42
4. Intellectual Curiosity	410			-	32	57	26	22	25	31	34	27	30	28	31	45
5. Work Habits	392				-	41	53	32	26	19	35	36	32	23	34	31
6. Creativity	392					-	32	29	33	42	52	33	48	34	37	59
7. Likableness	429						-	29	27	18	44	41	32	24	34	25
8. Peer Relationships	323							-	49	41	25	40	34	35	48	22
9. Personal Adjustment	406								-	52	31	33	45	31	41	29
10. Self-direction	395									-	44	30	53	35	36	46
11. Receptiveness to New Experience	403										-	36	52	37	35	27
12. Acculturation	398											-	38	35	38	52
13. Integrity	392												-	26	33	27
14. Social Values	331													-	48	31
15. Planfulness	323														-	-

Limitations

One technical limitation of the rotational solution presented herein becomes apparent with factor plots. Certainly some refinement or cleaning up might be achieved by graphic adjustment, and indeed an oblique solution might provide a cleaner fit. Yet, it is felt that the basic outline would seem sufficiently clear for the general purposes at this stage. Another limitation may stem from the particular treatment accorded missing data, where bias might accumulate rapidly on frequently omitted items. The distortion is not unreasonable, but present nevertheless.

More formidable is the usual problem that the structures derived can only emerge from the input components. This is particularly apparent when these results are compared with the structure emerging from an earlier 40-variable matrix (Davis, 1964a). The focus on observable, general traits, or reportable impressionable labels, may ignore other areas of importance which, if delineated, could solicit useful differentiation by faculty. One may well wonder what results would have been obtained had the stimulus been the items the student produced, rather than the student himself, where aspects of skill in manipulation of symbols or cognitive style may have provided a structural schema more relevant to faculty description of students toward an ultimate refinement of academic criteria.

More as a matter of caution than a limitation is the fact that the ratings employed reflect relatively superficial contact between rater and student. Faculty rated students in their classes who were singled out by random selection, and not many raters can be assumed to have more than restricted contact. Ratings of students studied intensively in a variety of situations might indeed produce different dimensions. It would seem important

to recognize that the structure found most likely reflects the brief and frequently one-way contact the classroom and campus permit the faculty to have with students in general.

The most severe limitation of the present analysis is that of confounding of possible sources of variance. There are surely differences among individual students, as there are differences in perceptions of a single student by several faculty members. Ideally, the data matrix should have dealt with r raters for s student on t traits, and analysis should have employed some technique such as Tucker's (1964) three-mode factor analysis. However, such techniques were not available at the time these analyses were conducted. An alternate solution would have involved careful sampling designs; but raters, as faculty pressed into service, could not be importuned easily to devote a great deal of time to rating the many students required by such a design, nor could the natural campus situation yield a sample of instructors with each therein knowing each subject in a sample of students. The partial solution employed (randomization) probably minimizes the possibility of gross impact of unique sources of variance, yet conceals the identity of these sources. The present results, then, reveal most exactly only a framework, with no evidence as to what structures within this framework are a function of individual differences among students, faculty members, or situations. (A later report in this series employs analysis of variance techniques in an attempt to track down some of the kinds of contamination and confounding present in the basic data matrices employed.)

The foregoing limitations prescribe useful areas for further exploration, but do not detract from the basic finding: that is, faculty members are capable of building, from normal contact with students, rather complex

multi-dimensional judgmental structures for describing these students, and the schema for the structures appears both reasonable and relevant to many important research issues. These issues range from the very practical and pressing need to identify new criteria which may be pertinent to selective admissions, to the more general and theoretical problems of role theory, social structure, and person perception.

Summary

The major purpose of this study was to determine the structure of characterizations of students by faculty members. What dimensions (or trait patterns) are of concern, or are observable, and appear meaningful?

Ratings of students by faculty members on 80 rating scale variables, together with SAT scores and high school and freshman average grades, were obtained; intercorrelations were computed, and the resultant matrix factored and rotated to the normal equamax criterion.

Eighteen factors were found, 16 of which were drawn primarily from the rating scale variables. The 18 factors accounted for about 86% of the correlation among the original variables. These factors reveal a relatively complex or multi-dimensional judgmental framework, with factors devoted to various aspects of intellectual qualities, functional orientation to work, character traits, interpersonal relationships, and intrapersonal adjustment.

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